Impact of COVID-19 on OHCA in Asia

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Background and Aim

- Little is known about the impact of COVID-19 on OHCA in Asia

- Leveraging on an ongoing OHCA registry, we aim to compare the incidence, pre-hospital mx and outcomes of OHCA between COVID and non-COVID periods, amongst countries in Asia

- We hypothesize that the pandemic would affect the incidence, characteristics and management of OHCA, leading to changes in outcomes

Methods

- Data source: PAROS registry

- Study period: 1ˢᵗ Jan 2017 to 31ˢᵗ Dec 2020
  - Pandemic: date where 1st COVID-19 case diagnosed or state of emergency declared to 31ˢᵗ Dec 2020
  - Pre-pandemic / control period: 1ˢᵗ Jan 2017 to last date before 1ˢᵗ COVID-19 case or state of emergency

- Study population: All EMS-attended OHCA

- Study outcomes: Pre-hospital ROSC, survived to hospital discharge

Methods

Variables of interest: incidence of OHCA, demographics, event characteristics, bystander interventions, EMS timings, outcomes

Other data required: population, COVID-19 data (incidence/prevalence, case-fatality rate), response to COVID-19, key dates (first case, date of emergency/lockdown)

Statistical analysis: multi-level regression modelling is used to compare pre-COVID and COVID periods, with separate models for each country/region

Significance

- Varying measures were imposed in each country to tackle the pandemic
- These measures may have ramifications on other aspects of healthcare.
- Knowledge of the impact on OHCA is vital for countries to adapt medical services and public health education in order to limit the collateral consequences of the pandemic

Update on data management

▸ Data collection is complete
- Singapore, Japan, Thailand, Vietnam, Indonesia

▸ Data collection is incomplete
- Malaysia, Philippines

▸ Awaiting confirmation on participation
- Taiwan, India, Pakistan, Lebanon, Zhejiang

Collaborations

- EURECA: Collaboration of OHCA registries to evaluate impact of COVID-19 on bystander CPR
- Aggregated results, with analysis done locally
- Participating registries: CARES, Aust-ROC, EURECA, PAROS

Aggregated data

Country:					
Data variable	2017	2018	2019	Before 2020	After 2020
Population in catchment area	Total population in catchment area	Total population in catchment area	Total population in catchment area	Total population in catchment area* (number of days before the pandemic) / 365 (Population1_2020)	Total population in catchment area* (number of days during the pandemic) / 365 (Population2_2020)
Patients resuscitated by bystander, first responder or EMS	Number of patients(1A)	Number of patients (1B)	Number of patients(1C)	Number of patients (1D)	Number of patients (1E)
Mean age	Years (SD)	Years (SD)	Years (SD)	Years (SD)	Years (SD)
Number of patients under 14	Number of patients (5A)	Number of patients (5B)	Number of patients (5C)	Number of patients (5D)	Number of patients (5E)
Number of patients that are male	Number of patients (6A)	Number of patients (6B)	Number of patients (6C)	Number of patients (6D)	Number of patients (6E)
Number of cardiac arrests witnessed by EMS	Number of patients (2A)	Number of patients (2B)	Number of patients (2C)	Number of patients (2D)	Number of patients (2E)
Number of patients resuscitated by bystander before EMS arrival	Number of patients (3A)	Number of patients (3B)	Number of patients (3C)	Number of patients (3D)	Number of patients (3E)
Number of patients resuscitated by EMS	Number of patients (4A)	Number of patients (4B)	Number of patients (4C)	Number of patients (4D)	Number of patients (4E)

Thank you

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